

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Spraying device for water under pressure comprising: ~~[[-]]~~ a tubular body which defines a chamber (3) connected to a supply of water under pressure, ~~[[-]]~~ a nozzle (1) arranged at the outlet of ~~[[the]]~~ said chamber (3) ~~[[,]]~~ and equipped with an orifice (7) forming an atomizer (12) which extends from the neck of ~~[[the]]~~ said nozzle and ~~[[-]]~~ a constriction organ in the form of a valve (6) ~~[[,]]~~ that is arranged in the orifice (7) of ~~[[the]]~~ said nozzle in order to form a hollow, thin-walled jet, ~~characterized in that the wherein~~ said orifice (7) comprises ~~[[a]]~~ an external surface shaping the hollow jet, which is arranged to produce ~~at the level of this latter,~~ an asymmetry of rotation around the ejection axis (4).

2. (currently amended) ~~Spraying device according to Claim 1~~ Spraying device for water under pressure comprising: a tubular body which defines a chamber (3) connected to a supply of water under pressure, a nozzle (1) arranged at the outlet of said chamber (3) and equipped with an orifice (7) forming an atomizer (12) which extends from the neck of said nozzle and a constriction organ in the form of a valve (6) that is arranged in the orifice (7) of said nozzle in order to form a hollow, thin-walled jet,

wherein said orifice (7) comprises a surface shaping the hollow jet, which is arranged to produce an asymmetry of rotation around the ejection axis (4),

~~characterized in that~~ wherein the surface shaping the jet comprises a truncated part A which extends from the neck (11) of the nozzle (1) and which is followed by a discharge surface B, the angle of which in the axial longitudinal plane of the said nozzle changes in accordance with a non-linear profile diminishing from upstream to downstream, and the axial length of which varies between a value zero or essentially zero with, at this location, a jet the outlet angle of which corresponds to the angle of the said truncated part, and a value of the order of several millimeters, adapted to the choice of the outlet angle desired for the said jet, this angle being less than the angle of the truncated part A.

3. (currently amended) Spraying device according to Claim 2, ~~characterized in that~~ wherein the aperture angle of the hollow jet varies from a value H which is of the order of at least 60° and a value V which may be less than 20°.

4. (currently amended) Spraying device according to claim 1, ~~characterized in that it comprises~~ further comprising at the level of the surface shaping the hollow jet, grooves (15, 15') which are oriented according to a plane passing through the axis (4) of the nozzle, these grooves are arranged either at the level of the trailing edge (13) of [[the]] said nozzle or at the level of the neck (11).

5. (currently amended) Spraying device according to Claim 4, ~~characterized in that~~ wherein the grooves (15, 15') are positioned with an angular spacing varying from 2° to 10°.

6. (currently amended) Spraying device according to Claim 4, ~~characterized in that~~ wherein the grooves (15, 15') have an axial length such that they make it possible to maintain a leakage flow rate when the valve (6) is in the active closure position.

7. (currently amended) Spraying device according to claim 4, ~~characterized in that it comprises~~ further comprising grooves (15, 15') made by means of a disk type milling cutter (16, 16'), the periphery of which forms an angle of 90°, this milling cutter is positioned in a plane passing through the axis of the nozzle.

8. (currently amended) ~~Spraying device according to claim 1~~ Spraying device for water under pressure comprising: a tubular body which defines a chamber (3) connected to a supply of water under pressure, a nozzle (1) arranged at the outlet of said chamber (3) and equipped with an orifice (7) forming an atomizer (12) which extends from the neck of said nozzle and a constriction organ in the form of a valve (6) that is arranged in the orifice (7) of said nozzle in order to form a hollow, thin-walled jet, wherein said orifice (7) comprises a surface shaping the hollow jet, which is arranged to produce an asymmetry of rotation around the ejection axis (4),

~~characterized in that it comprises~~ further comprising
two nozzles (1) which are connected to corresponding chambers (3)
fed with water under pressure, these nozzles (1) are centered in
the same plane and form between them an angle which is included
between 60° and 100°, and ~~in that it comprises~~ means for the
simultaneous control of the valves (6) of [[the]] said nozzles
making it possible to vary at will the flow of the water to be
sprayed under pressure.

9. (currently amended) Spraying device according to
Claim 8, ~~characterized in that it comprises~~ further comprising
valves (6) adjustable by means of a screw nut system, each valve
comprising a part acting as a nut, adjustable by means of a screw
(31), this valve (6) being prevented from rotation by appropriate
means and each adjustable screw (31) being equipped with a toothed
wheel (34) which is geared to the same motorized endless screw
(35), this motorized screw making possible the simultaneous
control of the two valves (6).

10. (currently amended) Spraying device according to
Claim 8, ~~characterized in that it comprises~~ further comprising a
single-piece body (2) equipped with drill holes forming the
chambers (3) supplying water under pressure, these chambers are
arranged to receive the spraying nozzles (1), [[the]] said body
(2) being also equipped with drill holes for the installation of
nucleation means (20) fed with water under pressure at the same
time as the nozzles (1), and with air under pressure, these

nucleation means (20) being present in the form of cartridges
screwed to the extremity of the drill holes.